

COAL AND ASH HANDLING PLANT

constructed rubber belt. The belt runs over two pulleys fixed at each end of a casing, which may be of the open type or completely enclosed, as shown in fig. 12. In this particular type of elevator the adjusting gear for maintaining the correct tension on the belt is located at the upper end of the casing. This is an important feature, as it permits the lower pulley to remain in a fixed position, thus maintaining a constant clearance between the buckets and the curved bottom plate of the boot.

These elevators have been built with the upper and lower pulleys spaced 95 ft. apart, and with a handling capacity of 200 tons per hour. It will be appreciated that the belt and bucket type of elevator has an advantage, from an operating point of view, over the metal chain and bucket type, in that a chain which breaks during working usually does so without warning, whereas an elevator belt always gives ample warning before failure, so that a replace belt may be obtained or repairs carried out at the first opportunity,

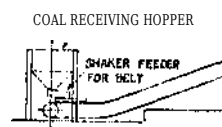


Fig. 13, Typical arrangement of belt conveyor

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Belt Conveyors.—It is claimed that the belt conveyor has many advantages over the chain and bucket types of conveyors in that the belt conveyor is simpler and can be made in larger capacities. It is lighter and therefore requires a cheaper and more simple structure to carry it. Further, it is less likely to fail without giving warning, as, unlike a metal chain, the belt shows unmistakable signs of impending failure some considerable time beforehand, and provision for replacement or repairs can be made.

Typical arrangements of belt conveying systems are shown in fig. 13, in which diagram A shows a simple horizontal belt conveyor, as in fig. 8, arranged for receiving coal from a bucket elevator and distributing it to the coal bunkers underneath. Diagram u shows a complete* coal handling system for a power plant, consisting of one belt elevator conveyor arranged to carry coal from a coal receiving hopper situated below rail level to the overhead bunkers. The elevating portion of the belt is inclined at an angle of about 18° to the horizontal, so that the coal will not run back down the belt.

In each case a travelling tripper is provided on the top of the bunkers for throwing off the coal where desired.